

Curriculum Vitae

Charles Cannon Edwards II, M.D.

Revised October 2020

- Education:**
- Fellow, Spine Surgery, Maryland Spine Center
Baltimore, Maryland, August 2002 – Dec. 2002

 - Fellow, Spine Surgery, Washington University
St. Louis, Missouri, August 2001 – July 2002

 - Resident, Orthopaedic Surgery, Emory University
Atlanta, Georgia, July 1996- June 2001

 - M.D., University of Maryland, School of Medicine
Baltimore, Maryland, September 1992- May 1996

 - B.A., Chemistry with Honors in Engineering
Washington and Lee University, Lexington, Virginia
August 1988- June 1992

Honors/Awards:

Residency:

- First Place, Resident Paper Competition, Georgia Orthopaedic Society Annual Meeting 2000, Laminoplasty versus Laminectomy and Fusion for the Management of Cervical Myelopathy, An Independent Matched Cohort Analysis
- Mario Boni Award for the Outstanding Paper, European Cervical Spine Research Society Annual Meeting, London, England, June, 2000: Laminoplasty versus Laminectomy and Fusion ...
- Best Paper, Emory Resident Research Day 2000: Laminoplasty versus Laminectomy and Fusion ...
- Best Resident/ Fellow Paper, Clinical Orthopaedic Society Annual Meeting 1999, T- Saw Laminoplasty for the Management of Cervical Spondylotic Myelopathy: Clinical and Radiographic Outcome.
- Best Paper, Emory Resident Research Day 1999: T-Saw Laminoplasty ...
- Elected Representative, Resident- Faculty Advisory Panel: 1997-1998, 1998-1999, 1999-2000
- OITE 1999: 95th percentile for year in training
- OITE 1998: 94th percentile for year in training

Medical School:

- * Alpha Omega Alpha
- * Sigma Chi Scholarship in Medicine

College:

- * Phi Beta Kappa
- * Omicron Delta Kappa
- * Magna Cum Laude
- * Sigma Chi Fraternity President (1990-91 and 1991-92)
- * University Scholar- Athlete of the Year Recipient, 1992
- * School Record Holder 10,000 meter run

Other:

- * Eagle Scout 1984, Top Scout 1988
- * Marathon completions: Harrisburg 2018 (2:57), New York 2017 (2:54), Berlin 2016 (2:57), Reykjavik 2015 (2:52), Oporto 2014 (2:52 1stAmerican), Budapest 2012 (2:56 – 1st American), Amsterdam 2011 (2:46), Venice 2010 (2:45), Dublin 2009 (2:46, 95th of 13,000), Marine Corps 2008 (2:46 – 56th of 18,261), Chicago 2007 (3:02, 244th of 25,522), Athens 2006 (2:51; 1st American finisher), Baltimore 2006 (2:46, placed 1st in age group), New York 2005 (2:49, placed 273 of 37,000), Boston 2005 (3:06), New York 2004 (2:58), Philadelphia 1996 (2:56), Disney 1995(2:58), Greensboro 1988 (2:40), Birmingham 1989 (2:50)
- * Baltimore Half Marathon: 2009 -1st Place: 35-39 Age Group (1:21:20); 2014 -Masters Champion & 1st place: 40-44 Age Group (1:22:18); 2016 -2nd Place 45-49 Age Group (1:24:39); 2018 – 1st place 45-49 Age Group (1:24:08).
- 2010 Annapolis 10 Mile Run: 1st Place: 40-44 Age Group, 2nd place 2012
- * Baltimore Magazine Top Doctors: listed for Orthopedic Surgery – Spine (2014, 2017, 2018, 2019, 2020) and featured on Magazine cover (2014)
- * 40 Under 40: A look at the area’s emerging leaders, Honoree, *Baltimore Business Journal*, September 2004
- * 2006 Health Care Hero Finalist: The Daily Record, Baltimore, Maryland *Business Journal*, March 2006.
- Weekly Bible Study/House Church Leader and Host, 2004 – present.
- Middle School Youth Group (Wildfire), Grace Fellowship Church, leader 2011 to 2018.
- Eagle to Eagle Award Recipient 2015, Gathering of Eagles, Baltimore Areal Council, BSA
- Boy Scouts of America District Award of Merit for outstanding service to youth, June 2018
- National Eagle Scout Association Outstanding Eagle Scout Award, October 2019.

Board Certification:

American Board of Orthopaedic Surgery
Part I: Passed - July 2001
Part II: Passed – July 2004

Professional Positions:

- The Maryland Spine Center, Mercy Medical Center, Baltimore, Maryland
 - Physician and Partner, 2002-present.
 - Medical Director, 2006 to present.

Civic Board Positions:

- Gilman School, Baltimore, Maryland, Board of Trustees, 2012 to present.
 - Secretary, 2019-present
 - Chairman, Health Committee, 2016 – present.
- Cambridge School, Baltimore, Maryland, Board of Trustees, 2012 to 2016.
 - Chairman, Strategic Plan Steering Committee (2012-2013).
 - Chairman of the Board of Trustees (2014-2016)
- Boy Scout Troop 35, Troop Committee Chairman, 2015 – present.
- Grace Fellowship Church, Lead Pastor Search Committee, 2015 – 2016.
- Boy Scouts of America, Baltimore Area Council Spirit of Scouting Award Banquet Chairman, 2015, 2016.

Corporate Board Positions:

- SurgCenter of Towson, Board of Managers, 2020-2023
- Vytis Shield, Board of Directors, 2017-present
- Renovis Surgical, Board of Directors and Secretary, 2014-2019

Peer-Reviewed Publications:

- John J. Bowman, **Charles C. Edwards II**, Clayton Dean, Justin Park, Charles C. Edwards Sr., Incidence and Risk Factors for Postoperative Urinary Retention Following Lumbar Spine Fusion, Submitted to Clinical Spine Surgery, October 2020.
- Charles H. Brown IV, **Charles C. Edwards II**, Emily L. Jones, Charles Lin, Lisa R. Yanek, Melody Esmaili, Yara Gorashi, Richard A. Skelton, Daniel Kaganov, Ryan Curto, Noah Lessing, Stephanie Cha, Elizabeth A. Colantuoni, Karin J. Neufeld, Frederick E. Sieber, Clayton L. Dean, Charles W. Hogue, Effect of Spinal Anesthesia with Targeted Sedation Compared with General Anesthesia on Delirium in Older Adults Undergoing Lumbar Spine Fusion Surgery: the SHARP Randomized Controlled Trial, Submitted to Anesthesia, October 2020.
- John Bownan, **Charles Edwards II**, Extradural Arachnoid Cyst with Bony Erosion: A Rare Case Report, Journal of Spine Surgery, In Press, October 2020
- Justin Smith, **Charles Edwards II**; Operative versus nonoperative treatment for adult symptomatic lumbar scoliosis at 5-year follow-up: durability of outcomes and impact of treatment-related serious adverse events. J Neurosurgery – Spine – accepted October 2020.
- Lessing, Noah L; **Edwards, Charles C. II**; Dean, Clayton L.; Waxter, Olive H.; Lin, Charles; Brown, Charles H. IV. Spinal anesthesia for geriatric lumbar spine surgery:

a comparative case series, *International Journal of Spine Surgery, Int J Spine Surg* 2020

- Brown CH 4th, Jones E, Lin C, Esmalli E, Gorashi Y, Skelton Rr, Krragnov D, Colantuoni E, Yanek L, Neufield K, Kamath V, Sieber F, Dean C, **Edwards C II**, Hogue C; Shaping anesthetic techniques to reduce post-operative delirium (SHARP) study: a protocol for a prospective pragmatic randomized controlled trial to evaluate spinal anesthesia with targeted sedation compared with general anesthesia in older adults undergoing lumbar spine surgery. *BMC Anesthesiology* 19(1) 192, 2019.
- Ryan Curto, **Charles Edwards II**, Charles Lin, Charles Brown IV; Lengthy complex lumbar fusion surgery in high-risk elderly patient under spinal anesthesia: A case report; *International Journal of Surgery Case Reports* 65, 131-134, 2019.
- Justin S. Smith, Christopher I. Shaffrey, Michael P. Kelly, Elizabeth L. Yanik, Jon D. Lurie, Christine R. Baldus, **Charles Edwards II**, Steven D. Glassman, Lawrence G. Lenke, Oheneba Boachie-Adjei, Jacob M. Buchowski, Leah Y. Carreon, Charles H. Crawford III, Thomas J. Errico, Stephen J. Lewis, Tyler Koski, Stefan Parent, Han Jo Kim, Christopher P. Ames, Shay Bess, Frank J. Schwab, Keith H. Bridwell; Effect of Serious Adverse Events on Health-Related Quality of Life Measures Following Surgery for Adult Symptomatic Lumbar Scoliosis; *Spine* (2019) 44 (17).
- Charles Crawford, Jeffrey Gum, Lawrence Lenke, Jacob Buchowski, **Charles Edwards**, Steven Glassman, and Leah Carreon; Does Topical Vancomycin Powder Use in Instrumented Lumbar Spine Fusions Increase the Incidence of Vancomycin Resistant “Superbug” Infections?; *JSM Neurosurg Spine* 6(1): 1095 (2018)
- Peter C. Rowe, Colleen L. Marden, Scott Heinlein, **Charles C. Edwards II**; Improvement of severe myalgic encephalomyelitis/chronic fatigue syndrome symptoms following surgical treatment of cervical spinal stenosis, *J Transl Med* (2018) 16:21.
- **Charles C. Edwards II**, Noah Lessing, Lisa Ford, Charles Edwards, Deep Vein Thrombosis After Complex Posterior Spine Surgery: Does Staged Surgery Make a Difference? *Spine Deformity*. Volume 6, Issue 2, March–April 2018, pg141-147
- Steven D. Glassman, Keith H. Bridwell, Christopher I. Shaffrey, **Charles C. Edwards II**, Jon D. Lurie, MD, Christine R. Baldus, Leah Y. Carreon. Health-Related Quality of Life Scores Underestimate the Impact of Major Complications in Lumbar Degenerative Scoliosis Surgery; *Spine Deformity* 6 (1) 67-71; January 2018.
- Lessing, Noah L.; **Edwards, Charles C. II**; Lin, Charles; Brown, Charles H. IV. Complex Lumbar Spine Fusion in an Elderly Patient Under Spinal Anesthesia; *Orthopedics* 40(5), e915-917, 2017.
- Lessing, Noah L.; **Edwards, Charles C. II**; Brown, Charles H. IV; Ledford, Emily C.; Dean, Clayton L.; Lin, Charles; Edwards, Charles C. Spinal Anesthesia in Elderly Patients Undergoing Lumbar Spine Surgery; *Orthopedics*. 40(2):e317-e322, March 1, 2017.
- **Edwards, Charles C. II**; Dean, Clayton; Edwards, Charles C; Can Dysphagia Following Anterior Cervical Fusions With rhBMP-2 Be Reduced With Local Depomedrol Application?: A Prospective, Randomized, Placebo-Controlled, Double-Blind Trial; *Spine*. 41(7):555-562, April 1, 2016.
- Chapman, TM Jr; Baldus, CR; Lurie, JD; Glassman, SD; Schwab, FJ; Shaffrey, CI; Lafage, V; Boachie-Adjei, O; Kim, HJ; Smith, JS; Crawford, CH III; Lenke, LG; Buchowski, JM; **Edwards, CC II**; Koski, T; Parent, S; Lewis, S; Kang, DG; McLendon, J Jr.; Metz, L; Zebala, LP; Kelly, MP; Spratt, KF; Bridwell, KH. Baseline Patient-Reported Outcomes Correlate Weakly With Radiographic

Parameters: A Multicenter, Prospective NIH Adult Symptomatic Lumbar Scoliosis Study of 286; Spine. 41(22):1701-1708, November 15, 2016.

- Neuman, Brian J. MD; Baldus, Christine RN, MHS; Zebala, Lukas P. MD; Kelly, Michael P. MD; Shaffrey, Christopher MD; **Edwards, Charles II MD**; Koski, Tyler MD; Schwab, Frank MD; Glassman, Steven MD; Parent, Stefan MD; Lewis, Stephen MD; Lenke, Lawrence G. MD; Buchowski, Jacob M. MD; Smith, Justin S. MD, PhD; Crawford, Charles H. III MD; Kim, Han Jo MD; Lafage, Virginia PhD; Lurie, Jon MD; Carreon, Leah MD; Bridwell, Keith H. MD; Patient Factors That Influence Decision Making: Randomization Versus Observational Nonoperative Versus Observational Operative Treatment for Adult Symptomatic Lumbar Scoliosis; Spine 41(6); March 2016 - Volume 41.
- Steinmann JC, **Edwards CC**, Eickmann T, Carlson A, Blight A; Surgeon ownership in medical device distribution: does it actually reduce healthcare costs? Expert Rev. Pharmacoecon. Outcomes Res. Early online, 1–7, July, 2015.
- **Charles Edwards, II, MD**, Alexis Blight, BS, Kak Kim, MD, Charles Edwards, Sr., MD; Polymethylmethacrylate Entrapped in Inferior Vena Cava Filter After a Scheuermann Kyphosis Revision Surgery; Spine Deformity 3(6): 604-7; Nov 2015.
- Van Horn, Andrea; Blight, Alexis; **Edwards Charles**: Dysphagia With Diffuse Idiopathic Skeletal Hyperostosis/Forestier’s Disease; The Journal for Nurse Practitioners 10(9): 737-41, October 2014.
- Baldus, Christine; Bridwell, Keith; Harrast, John; Shaffrey, Christopher; Ondra, Stephen; Lenke, Lawrence; Schwab, Frank; Mardjetko, Steven; Glassman, Steven; **Edwards, Charles II**; Lowe, Thomas; Horton, William; Polly, David Jr.; The Scoliosis Research Society Health-Related Quality Of Life (SRS-30) Age-Gender Normative Data: An Analysis of 1346 Adult Subjects Unaffected by Scoliosis Spine., Spine. 36(14):1154-1162, June 15, 2011.
- Bridwell, Keith H.; Baldus, Christine; Berven, Sigurd; **Edwards, Charles II**; Glassman, Steven; Hamill, Christopher; Horton, William; Lenke, Lawrence G.; Ondra, Stephen; Schwab, Frank; Shaffrey, Christopher; Wootten, David; Changes in Radiographic and Clinical Outcomes With Primary Treatment Adult Spinal Deformity Surgeries From Two Years to Three- to Five-Years Follow-up; Spine. 35(20):1849-1854, September 15, 2010.
- Freedman, B; Horton, W; Rhee, Jo; **Edwards, C II**; Kuklo, T.; Reliability Analysis for Manual Radiographic Measures of Rotatory Subluxation or Lateral Listhesis in Adult Scoliosis, Spine. 34(6):603-608, March 15, 2009
- Baldus, C; Bridwell, KH.; Harrast, J; **Edwards, C II**; Glassman, S; Horton, W; Lenke, LG.; Lowe, T; Mardjetko, S; Ondra, S; Schwab, F; Shaffrey, C; Age-Gender Matched Comparison of SRS Instrument Scores Between Adult Deformity and Normal Adults: Are All SRS Domains Disease Specific?; Spine. 33(20):2214-2218, September 15, 2008
- Kuhns, CA; Bridwell, KH; Lenke, LG; Amor, Courtney; Lehman, R; Buchowski, JM; **Edwards, CC**; Baldus C; Thoracolumbar Deformity Arthrodesis Stopping at L5: Fate of the L5-S1 Disc, Minimum 5-Year Follow-up. Spine. 32(24):2771-2776, 2007.
- Bridwell Kh, Berven S, **Edwards CC**, Glassman S, Hamill C, Schwab F, The Problems and Limitations of Applying Evidence Based Medicine to Primary Surgical Treatment of Adult Spinal Deformity. Spine, 32: S135-S139, 2007.
- Kim YJ, Bridwell KH, Lenke LG, Cho KJ, **Edwards CC**, Rinella AS, Pseudarthrosis in Adult Spinal Deformity Following Multisegmental

- Instrumentation and Arthrodesis. *Journal of Bone and Joint Surgery*, 88-A, 721-728, 2006.
- Kim YJ, Bridwell KH, Lenke LG, Rinella AS, **Edwards CC**, Pseudarthrosis in primary fusions for adult idiopathic scoliosis: Incidence, risk factors and outcome analysis. *Spine* 30:468-74, 2005.
 - Rinella AS, Lenke LG, Whitaker C, Kim YJ, Park S, Peele M, **Edwards C**, Bridwell KH, Perioperative Halo-gravity traction in the treatment of severe scoliosis and kyphosis. *Spine* 30:475-482, 2005.
 - **Glattes, R**; Bridwell, K.; Lenke, L; Kim, Y; Rinella, A; **Edwards, C**; Proximal Junctional Kyphosis in Adult Spinal Deformity Following Long Instrumented Posterior Spinal Fusion: Incidence, Outcomes, and Risk Factor Analysis; *Spine*. 30(14):1643-1649, July 15, 2005
 - **Edwards CC**, Bridwell KH, Patel A, Rinella A, Berra A, Lenke LG , Long adult deformity fusions to L5 and the sacrum: A matched cohort analysis. *Spine* 29:1996-2005, 2004.
 - **Edwards CC**, Lenke LG, Peele M, Sides B, Rinella A, Bridwell KH, Selective thoracic fusion for AIS curves with C modifier lumbar curves: 2-16 year radiographic and clinical results. *Spine* 29:536-46,2004.
 - Rinella A, Bridwell KH, Kim YJ, Rudzki J, **Edwards CC**, Roh M, Lenke LG Late complications of adult idiopathic scoliosis primary fusions to L4 and above? The effect of age and distal fusion level, , *Spine* 29:318-325, 2004.
 - Rinella A, Lenke LG, Peele M, **Edwards CC**, Bridwell KH, Sides B Comparison of SRS questionnaire results submitted by both parents and patients in the operative treatment of idiopathic scoliosis, *Spine* 29, 303-310; 2004.
 - **Edwards CC**, Cha C, Karpitskaya Y, Heller JG, Lauryssen C, Yoon T, Riew KD, Accurate Identification of Complications after Spine Surgery: Surgeon's Records vs. Patients Reported Outcome Questionnaire, *Journal Bone and Joint Surg.* Feb. 2004.
 - Lenke LG, **Edwards CC**, Bridwell KB, The Lenke Classification of Adolescent Idiopathic Scoliosis: How it organizes curve patterns as a template to perform selective fusions of the spine, *Spine* 28:S199-207, 2003.
 - Bridwell KH, **Edwards CC**, Lenke LG, The Pros and Cons to Saving the L5-S1 Motion Segment in a Long Scoliosis Fusion Construct, *Spine* 28, S234-242, 2003.
 - Rhee JM, Bridwell KH, Lenke LG, Baldus C, Blanke K, **Edwards CC**, Berra A, Staged posterior surgery for severe adult deformity, *Spine* 28, 2116-2121, 2003.
 - **Edwards CC**, Bridwell KH, Patel A, Rinella AS, Kim YJ, Berra A, Lenke LG, Thoracolumbar Deformity Arthrodesis to L5 in Adults: The Fate of the L5-S1 Disk, *Spine* 28, 2122-2131, 2003.
 - Complications and outcomes of pedicle subtraction osteotomies for fixed sagittal imbalance, Bridwell KH, Lewis S, **Edwards CC**, Lenke LG, Iffrig TM, Berra A, Baldus C, Blanke K, *Spine* 28, 2093-2101, 2003.
 - **Edwards CC**, Riew KD, Cervical Myelopathy: Current Diagnostic and Treatment Strategies, *The Spine Journal*, 3:68-81, 2003.
 - **Edwards CC**, Heller JG, Murakami H, Corpectomy versus Laminoplasty for Multi-Level Cervical Myelopathy: An Independent Matched-Cohort

- Analysis: *Spine*, 27:1168-75, 2002.
- **Edwards CC**, Haraszi CJ, McGillivray GR, Gutow AP, Arthroscopic Assessment of Intra-Articular Distal Radius Fracture Reduction: *J. Hand Surg.* 26A:1036-41, 2001.
 - Heller JG, **Edwards CC**, Morikami H, Rodts G, Laminoplasty versus Laminectomy and Fusion for the Management of Cervical Myelopathy, An Independent Matched Cohort Analysis, *Spine* 26,1330-36, 2001.
 - **Edwards CC**, Bailey RW, Laparoscopic Hernia Repair: The Learning Curve *Journal of Laparoscopy, Endoscopy & Percutaneous Techniques* 10, 149-53, 2000.
 - Ludwig S, Kowalski J, **Edwards CC**, Heller JG, Placement of Pedicle Screws in the Cervical Spine: Comparative Accuracy Using Two Techniques, *Spine* 25, 2675-81, 2000.
 - **Edwards CC**, Heller JG, Silcox DH, T-Saw Laminoplasty for the Management of Cervical Spondylotic Myelopathy: Clinical and Radiographic Outcome *Spine* 25, 1788-94, 2000.
 - Van Ness KE, **Edwards CC**, Nosker TJ, Renfree RW, Morphology of Blends of Post-consumer PET with Curbside Trailings, *ANTEC* 1993: 16: 255-62.

Review Articles:

- **Edwards CC**, Riew KD, Cervical Myelopathy: Current Diagnostic and Treatment Strategies, *The Spine Journal*, 4:68-81, 2003.
- **Edwards CC**, Heller JG, Posterior Approaches for the Surgical Treatment of Multilevel Cervical Spondylotic Myelopathy, *Current Opinion in Orthopaedics*, 12: 224-30, 2001.
- **Edwards CC**, Heller JG, Posterior Approaches for the Surgical Treatment of Multilevel Cervical Spondylotic Myelopathy: Laminoplasty versus Laminectomy, *Contemporary Spine Surgery*; 3:1-7, 2002.

Book Chapters:

- Reduction of High-Grade Spondylolisthesis, eds. Bridwell K, DeWald R, Lipincott, Philadelphia, Pennsylvania: The Textbook of Spine (4rd ed.), Edwards CC, **Edwards C**, 2019.
- Selective Thoracic Fusion for Adolescent Idiopathic Scoliosis, eds. Bridwell K, DeWald R, Lipincott, Philadelphia, Pennsylvania: The Textbook of Spine (3rd ed.), Freeman B, **Edwards, C**; Bridwell,K, 2012
- Adolescent Idiopathic Scoliosis: The Current State of the Art, eds. Bridwell K, DeWald R, Lipincott, Philadelphia, Pennsylvania: The Textbook of Spine (3rd ed.), **Edwards, C**; Bridwell,K, 2012.
- Spondylolisthesis: The Current State of the Art, eds. Bridwell K, DeWald R, Lipincott, Philadelphia, Pennsylvania: The Textbook of Spine (3rd ed.), **Edwards C**; Wiedenbaum M, 2012.

- Reduction of High-Grade Spondylolisthesis, eds. Bridwell K, DeWald R, Lippincott, Philadelphia, Pennsylvania: The Textbook of Spine (3rd ed.), Edwards CC, **Edwards C**, 2012.
- Reduction of High-Grade Spondylolisthesis, eds. Vacarro A, Albert T, Thieme, Philadelphia, Pennsylvania: Spinal Surgery: Tricks of the Trade (2nd ed.), **Edwards CC**, Edwards CC, 2008.
- Essentials in Orthopaedics: Spine, eds. Garfin S and Bono C, Lippincott Williams & Wilkins, Baltimore, Maryland: Adult Scoliosis and Sagittal Imbalance, **Edwards CC**, Bridwell KH, 2004.
- Rothman Simeone - The Spine 5th edition, eds Herkowitz HN, et al. W.B. Saunders, Philadelphia, Pennsylvania, Laminoplasty, **Edwards CC**, Heller JG, 2006.
- The Spine- Master Techniques in Orthopaedic Surgery, ed Bradford D, Zdeblick T, Lippincott Williams & Wilkins, Baltimore, Maryland Lumbar Microdiscectomy, McCulloch JA, **Edwards CC**, Riew KD, 2004.

Technique Manual:

- Sacropelvic Fixation: Iliac and Sacral Screw Indications and Placement Technique, Bridwell H, Kuklo T, **Edwards CC**, Lenke LG, Berra A, Medtronic Sofamor Danek, 2004

National Presentations (Podium):

- Surgeon ownership in medical device distribution: does it actually reduce healthcare costs? , American Association of Orthopedic Surgeons Annual Meeting, Las Vegas, NV March 23, 2015.
- Long fusions to the sacrum for adult spinal deformity: How high do you go? The effect on sagittal alignment and outcomes, Scoliosis Research Society, Salt Lake City, Utah, September 2008.
- The changing practice of adult spinal deformity surgery: An emerging new paradigm for surgical approach, staged procedures and fusion levels., Scoliosis Research Society, Salt Lake City, Utah, September 2008.
- Long adult deformity fusions to L5 vs. sacrum/pelvis, Scoliosis Research Society, Edinburgh, Scotland, September 6, 2007. [nominee, Hibbs Award for Best Clinical Paper]
- CT Vacuum Disk Sign: A highly specific predictor of lumbar nonunion, International Meeting on Advanced Spine Techniques, Athens, Greece, July 14, 2006.
- Vertebral Corpectomies reconstructed with titanium mesh cages. American Academy of Orthopaedic Surgeons Annual Meeting, San Francisco, California, February 2004.
- Adult Deformity Fusions to L5 versus the Sacrum: A Matched Cohort Analysis, Scoliosis Research Society Annual Meeting, Quebec City, September 2003. [nominee, Hibbs Award for Best Clinical Paper]
- Pseudarthrosis in Adult Idiopathic Scoliosis Primary Fusions, Scoliosis Research Society Annual Meeting, Quebec City, September 2003.
- Proximal junctional kyphosis in adult spinal deformity following long instrumented posterior spinal fusion: Incidence, risk factors and outcomes, Scoliosis Research Society Annual Meeting, Quebec City, September 2003.
- Adult Deformity Fusions to L5 versus the Sacrum: A Matched Cohort North American Spine Society, Annual Meeting, San Diego, CA, November, 2003.
- Time Dependent Response of the Unfused Lumbar Curve after Selective Thoracic Fusion for AIS: 2-16 Year Radiographic and Clinical Follow-Up., World Spine II, Chicago, Illinois, August, 2003.
- Proximal junctional kyphosis in adult spinal deformity following long instrumented posterior spinal fusion: Incidence, risk factors and outcomes, World Spine II, Chicago, Illinois, August, 2003.
- Time Dependent Response of the Unfused Lumbar Curve after Selective Thoracic Fusion for AIS: 2-16 Year Radiographic and Clinical Follow-Up., Pediatric Orthopaedic Society of North America Annual Meeting, Amelia Island Florida, May, 2003.
- Corpectomy versus Laminoplasty for Multi-Level Cervical Myelopathy: An Independent Matched-Cohort Analysis, Meeting of the Central Japan Association of Orthopaedic Surgery and Traumatology, Kurashiki City,

Japan, Nov. 1, 2002.

- Pseudarthrosis in Adult Idiopathic Scoliosis Primary Fusions; correlation with the domino, cross link, and distal fusion level,. American Academy of Orthopaedic Surgeons, New Orleans, February 5-8, 2003.
- Time Dependent Response of the Unfused Lumbar Curve after Selective Thoracic Fusion for AIS: 2-16 Year Radiographic and Clinical Follow-Up., American Academy of Orthopaedic Surgeons, New Orleans, February 5-8, 2003.
- Thoracolumbar Deformity Arthrodesis to L5 in Adult Scoliotics: The fate of the L5-S1 Disk: Is it protected by a Deep Seated L5?, American Academy of Orthopaedic Surgeons, New Orleans February 5-8, 2003.
- Adult Deformity Fusions to L5 versus the Sacrum: A Matched Cohort Analysis, American Academy of Orthopaedic Surgeons, New Orleans, February 5-8, 2003.
- Accurate Identification of Complications after Spine Surgery: Surgeon's Records vs. Patients Reported Outcome Questionnaire, Cervical Spine Research Society Annual Meeting, Miami FL December 5-7, 2002.
- Accurate Identification of Complications after Spine Surgery: Surgeon's Records vs. Patients Reported Outcome Questionnaire, Scoliosis Research Society Annual Meeting, Seattle, Washington, September 19-22, 2002.
- Time Dependent Response of the Unfused Lumbar Curve after Selective Thoracic Fusion for AIS: 2-16 Year Radiographic and Clinical Follow-Up., Scoliosis Research Society Annual Meeting, Seattle, Washington, September 19-22, 2002.
- Staged posterior surgery for severe adult deformity, Scoliosis Research Society Annual Meeting, Seattle, Washington, September 9-22, 2002
- Complications (Pseudarthrosis, Neurologic Deficit) of pedicle subtraction osteotomies for fixed sagittal imbalance, Scoliosis Research Society Annual Meeting, Seattle, Washington, September 9-22, 2002.
- Thoracolumbar Deformity Arthrodesis to L5 in Adult Scoliotics: The fate of the L5-S1 Disk: Is it protected by a Deep Seated L5?, Scoliosis Research Society Annual Meeting, Seattle, Washington, September 9-22, 2002.
- Late complications of adult idiopathic scoliosis primary fusions to L4 and above? The effect of age and distal fusion level, Scoliosis Research Society Annual Meeting, Seattle, Washington, September 9-22, 2002.
- Comparison of SRS questionnaire results submitted by both parents and patients in the operative treatment of idiopathic scoliosis, Scoliosis Research Society Annual Meeting, Seattle, Washington, September 9-22, 2002.
- Arthroscopic Assessment of Intra-Articular Distal Radius Fracture Reduction, American Academy of Orthopaedic Surgeons Annual Meeting, Dallas TX, Feb 14, 2002
- Corpectomy versus Laminoplasty for Multi-Level Cervical Myelopathy: An Independent Matched-Cohort Analysis, Cervical Spine Research Society Annual Meeting, Monterey, CA, Dec. 1, 2001.
- Corpectomy versus Laminoplasty... North American Spine Society Annual Meeting, Seattle, WA, November 1, 2001.

- Laminoplasty versus Laminectomy and Fusion for the Management of Cervical Myelopathy, An Independent Matched Cohort Analysis, Joint Spine Section AANS Annual Meeting, March 1, 2001
- Laminoplasty versus Laminectomy and Fusion for the Management of Cervical Myelopathy, An Independent Matched Cohort Analysis, Cervical Spine Research Society Annual Meeting, Charleston, SC, Nov. 30 – Dec 3, 2000.
- Laminoplasty versus Laminectomy and Fusion, ...9th Annual Spine + Science + Management Symposium, New Orleans, LA, November 17-18, 2000.
- Laminoplasty versus Laminectomy and Fusion ..., North American Spine Society Annual Meeting, New Orleans, LA, October 25-28, 2000.
- Laminoplasty versus Laminectomy and Fusion ..., Georgia Orthopaedic Society Annual Meeting, Sea Island, Georgia, Sept. 5-8, 2000.
- Laminoplasty versus Laminectomy and Fusion..., European Cervical Spine Research Society Annual Meeting, London England, July 2000.
- “T-Saw” Laminoplasty for the Management of Cervical Spondylotic Myelopathy: Clinical and Radiographic Outcome, Cervical Spine Research Society Annual Meeting, Seattle, WA, Dec.16-18, 1999.
- “T-Saw” Laminoplasty for the Management of Cervical Spondylotic Myelopathy: Clinical and Radiographic Outcome, Clinical Orthopaedic Society Annual Meeting, Oct. 6-8, 1999, Orlando, FL.
- The Utility of Admission Urinalysis in Trauma Patients: A Reappraisal of Traditional Practice, American College of Surgeons, Georgia Chapter Annual Meeting, Sea Island, Georgia, March 14, 1997.
- The Utility of Admission Urinalysis in Trauma Patients: A Reappraisal of Traditional Practice, American College of Surgeons, Georgia Committee on Trauma, Annual Meeting, Macon, Georgia, November 8, 1997.
- Laparoscopic Inguinal Hernia Repair: The Effect of the Learning Curve on Peri-Operative Morbidity and Hernia Recurrence, 37th World Congress of Surgery, Acapulco, Mexico, August 21, 1997.

Invited Lectures:

- My Journey of Faith though Medicine: Mercy Medical Center, June 19, 2014.
- Department of Pediatrics Grand Rounds, Mercy Medical Center, Adolescent Idiopathic Scoliosis – The Current State of the Art; May 3, 2013.
- A Primer on Spine Pathology and Management, Anne Arundel Community College Physician Assistant Program, January 25, 2013.
- A Primer on Spine Pathology and Management, Anne Arundel Community College Physician Assistant Program, January 27, 2012.
- A Primer on Spine Pathology and Management, Anne Arundel Community College Physician Assistant Program, February 18, 2011.
- A Career in Medicine, The 2010 Cotton Lecture, Gilman School, Baltimore , Maryland, April 14, 2010.

- A Primer on Spine Pathology and Management, Anne Arundel Community College Physician Assistant Program, March, 2010.
- Sacro-Pelvic Fixation: Biomechanics and Indications, Bethesda Spine Workshop, Bethesda, Maryland, April 19, 2009
- Adult Scoliosis: Selection of Proximal and Distal Fusion Levels; The Role of a Short Segment Fusion, American Academy of Orthopaedic Surgeons Annual Meeting, Instructional Course Lecture, Las Vegas, February, 2009.
- Sacro-Pelvic Fixation: Biomechanics and Indications, Bethesda Spine Workshop, Bethesda, Maryland, April 13, 2008.
- Adult Scoliosis: Selection of Proximal and Distal Fusion Levels; The Role of a Short Segment Fusion, American Academy of Orthopaedic Surgeons Annual Meeting, Instructional Course Lecture, San Francisco, March 2008.
- Adult Scoliosis Debate: Circumferential Fusion is Preferred for the Treatment of Adult Scoliosis, American Academy of Orthopaedic Surgeons Annual Meeting, Instructional Course Lecture, San Francisco, March 2008.
- Sacro-Pelvic Fixation: Biomechanics and Indications, Bethesda Spine Workshop, Bethesda, Maryland, May 8, 2007.
- Evidence Based Medicine for the Treatment of Low Back Pain, Bethesda Spine Workshop, Bethesda, Maryland, June 6, 2006.
- Revision Lumbar Spine Surgery, Diagnostic and Treatment Strategies, Bethesda Spine Workshop, Bethesda, Maryland, June 4, 2006.
- Evidence Based Medicine for the Treatment of Low Back Pain, National Association of Orthopaedic Nurses Annual Meeting, Baltimore Chapter; Baltimore, Maryland, March 26, 2006.
- Evidence Based Medicine for the Treatment of Low Back Pain, Bethesda Spine Workshop, Bethesda, Maryland, June 2, 2005.
- Spine Reconstruction Surgery: *The Second Renaissance*, National Association of Orthopaedic Nurses Annual Meeting, Baltimore Chapter; Baltimore, Maryland, March 26, 2004.
- Cervical Myelopathy: The Great Masquerader, Department of Surgery Grand Rounds, Mercy Medical Center, Baltimore Maryland, November 13, 2003.
- New insights into pain mechanisms, Mercy Medical Center Round Table Discussion, November 5, 2003.
- Diagnostic and treatment strategies for pediatric spinal deformity, The current state of the art, Department of Pediatrics Grand Rounds, Mercy Medical Center, Baltimore Maryland, October 3, 2003.
- 6th Annual Advanced Techniques in Cervical Spine Decompression and Stabilization; Practical Anatomy Workshop, July 12-14, 2002, St Louis Missouri, Faculty.
- Surgical Treatment of Multi-Level Cervical Spondylotic Myelopathy: Laminoplasty, Section on Disorders of the Spine and Peripheral Nerves, American Association of Neurological Surgeons – 18th Annual Meeting, March 2, 2002.

National Presentations (Poster):

- Radiographic measurements in adult spinal deformity: What is the intra-observer reliability?, International Meeting for Advanced Spine Techniques, Paradise Island, Bahamas, July 10-12, 2007.
- Radiographic measurements in adult spinal deformity: What is the inter-observer reliability?, International Meeting for Advanced Spine Techniques, Paradise Island, Bahamas, July 10-12, 2007.
- Accurate Identification of Complications after Spine Surgery: Surgeon's Records vs. Patients Reported Outcome Questionnaire, American Academy of Orthopaedic Surgeons, New Orleans, February 5-8, 2003.
- Comparison of SRS questionnaire results submitted by both parents and patients in the operative treatment of idiopathic scoliosis, American Academy of Orthopaedic Surgeons, New Orleans, February 5-8, 2003.
- Laminoplasty versus Laminectomy and Fusion for the Management of Cervical Myelopathy, An Independent Matched Cohort Analysis, American Academy of Orthopaedic Surgeons Annual Meeting, San Francisco, CA, Feb. 28 – March 3, 2001.
- The Utility of Admission Urinalysis in Trauma Patients: A Reappraisal of Traditional Practice (Poster Presentation), American Association for the Surgery of Trauma Annual Meeting, Sept.9-12, 1998, Baltimore, MD.
- Laparoscopic Inguinal Hernia Repair: The Effect of the Learning Curve on Peri-Operative Morbidity and Hernia Recurrence (Poster Presentation), Society of the American Gastrointestinal and Endoscopic Surgeons, Philadelphia, Pennsylvania, March 13-17, 1996.

Professional Society Memberships:

- American Academy of Orthopaedic Surgeons, Fellow 2004
- Scoliosis Research Society, Member 2003
 - Terminology Committee Member 2004-2007
- Spinal Deformity Study Group Member 2005-2010
 - Adult Deformity Outcomes Subsection 2005 - 2010

Grant Supported Research:

- A Multi-Center Prospective Study of Quality of Life in Adult Scoliosis, National Institutes of Health (funded from 2010 -2017), co-investigator (underway).
- Procrit Administration Prior to Spine Surgery: DVT risk and transfusion prevention, funded 2004- 2006, co-investigator, sponsor: Orthobiotech, a FDA required study. (completed)

Sermon:

- Grace Fellowship Church, Stewardship of Time, September 16, 2012.

- Grace Fellowship Church, God's Redemptive Plan for Work, March 17, 2013.